

Figure 1. Compressor power consumption with varying inlet humidities: processing 400 scfm, 95 deg F to 70 deg F, 60 grains/lb. Evap-rotor is current invention and any invention where the rotor is downstream of the evaporator. Rotor-evap system is any invention where the rotor is upstream of the evaporator. Conventional system is without any desiccant dryer.

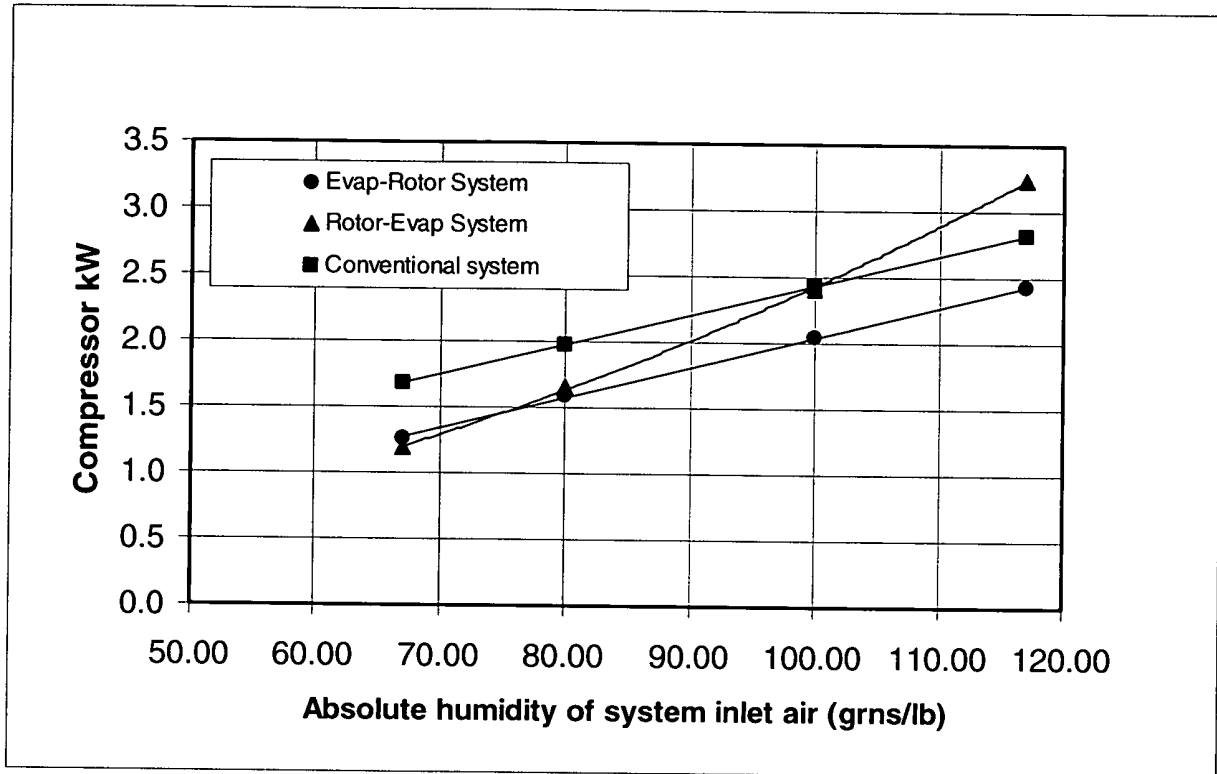


Figure 2. Invention schematic

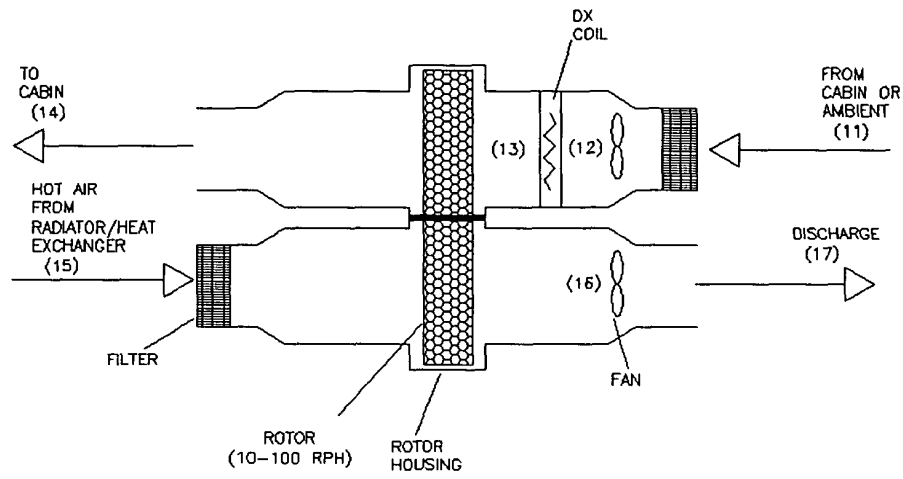


Figure 3. Rotor-evap system psychrometric process

A-before fan, B-entering rotor, C-entering evaporator, D-supply to cabin, E-regeneration air

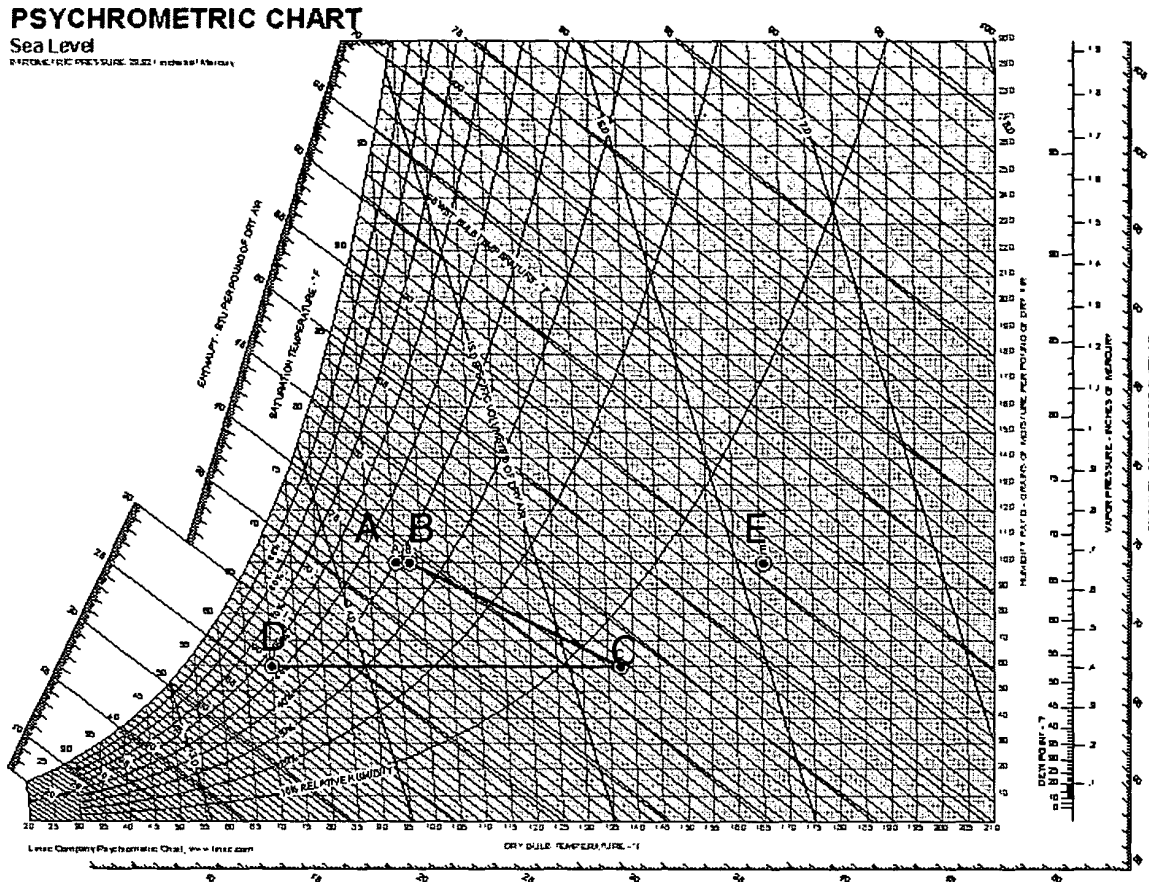


Figure 4. Evap-rotor system psychrometric process

A-entering fan, B-entering evaporator, C-entering rotor, D-supply to cabin, E-regeneration air

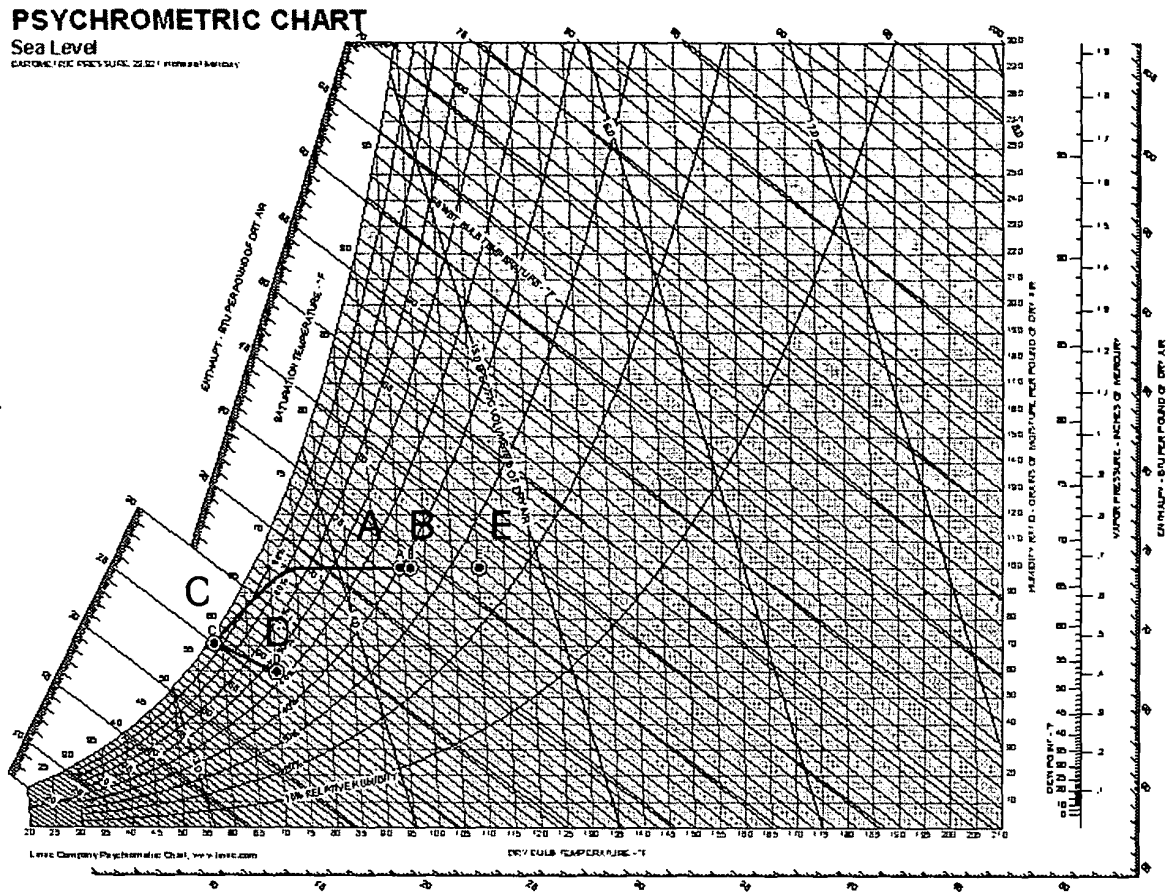


Figure 5. Latent Cooling Characteristics of Desiccant Rotor

350 sfpm, 50/50 split, GrnsProcIn = GrnsRegenIn

(DB = Dry bulb temperature)

